



# MPX Drought Update

August 19, 2021

Drought continues to worsen across Minnesota

## Key Messages

- All drought categories currently present in central and southern MN continued to expand
- Some expansion of drought conditions happened along the MN border in western WI
- Minor improvements did occur in eastern Pepin and southwest Eau Claire counties



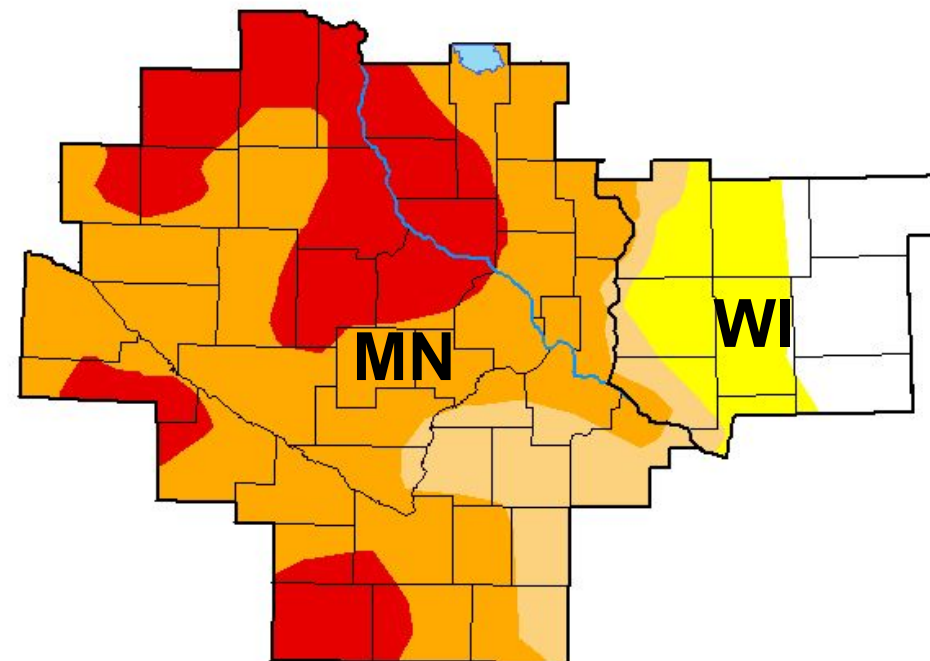
## Important Updates

- Drought conditions continue to expand in MN and in far western WI

## Next Scheduled Briefing

- By August 26th

### U.S. Drought Monitor Twin Cities/ Chanhassen, MN WFO



August 17, 2021  
(Released Thursday, Aug. 19, 2021)  
Valid 8 a.m. EDT

Drought Conditions (Percent Area)						
	None	D0-D4	D1-D4	D2-D4	D3-D4	D4
Current	8.42	91.58	82.70	71.51	24.42	0.00
Last Week 08-10-2021	12.60	87.40	82.50	63.00	22.76	0.00
3 Months Ago 05-18-2021	48.95	51.05	17.15	0.00	0.00	0.00
Start of Calendar Year 12-29-2020	6.43	93.57	3.49	0.00	0.00	0.00
Start of Water Year 09-29-2020	52.96	47.04	3.41	0.00	0.00	0.00
One Year Ago 08-18-2020	79.30	20.70	6.15	0.00	0.00	0.00

#### Intensity:

None	D2 Severe Drought
D0 Abnormally Dry	D3 Extreme Drought
D1 Moderate Drought	D4 Exceptional Drought

The Drought Monitor focuses on broad-scale conditions. Local conditions may vary. For more information on the Drought Monitor, go to <https://droughtmonitor.unl.edu/About.aspx>

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National Drought Mitigation Center



[droughtmonitor.unl.edu](https://droughtmonitor.unl.edu)



# Drought Monitor Change

August 19, 2021

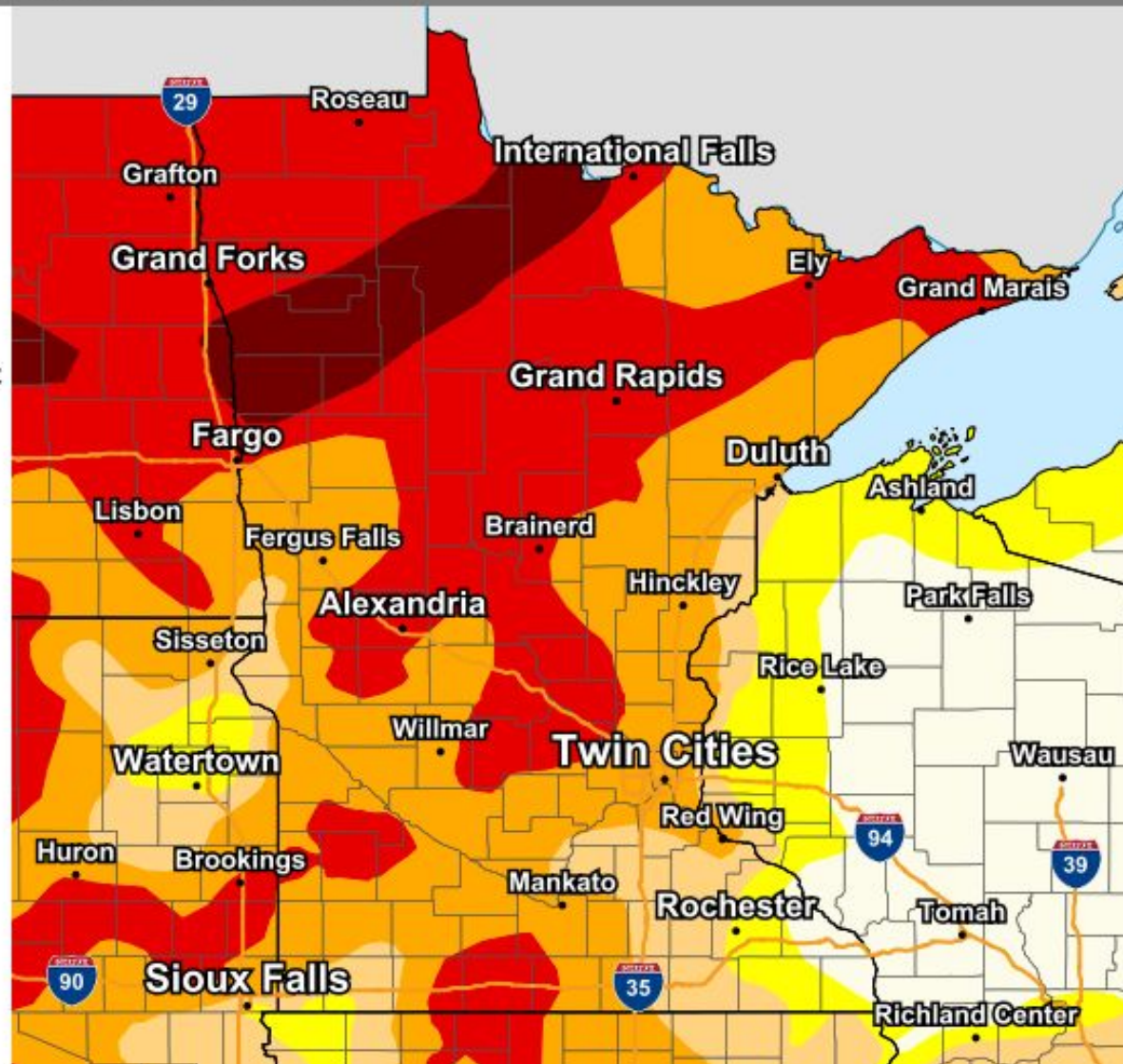
Latest Trend in the Drought Monitor for the North Central U.S.



Drought Monitor

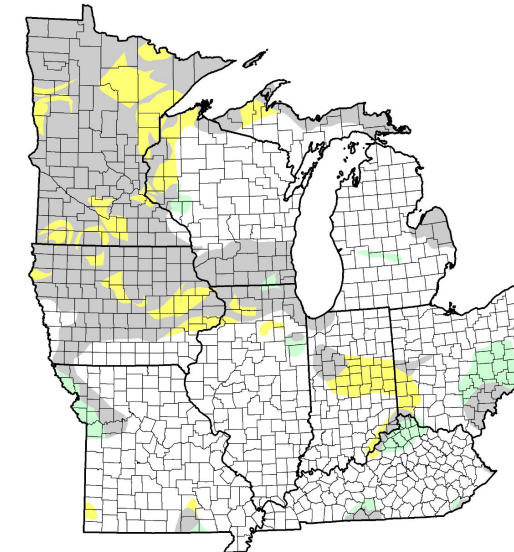
Valid Tuesday August 17th, 2021 at 7:00 AM CDT

- DO - Abnormally Dry
- D1 - Moderate Drought
- D2 - Severe Drought
- D3 - Extreme Drought
- D4 - Exceptional Drought



Graphic Created  
August 19th, 2021  
10:32 AM CDT

U.S. Drought Monitor Class Change - Midwest Climate Region  
1 Week

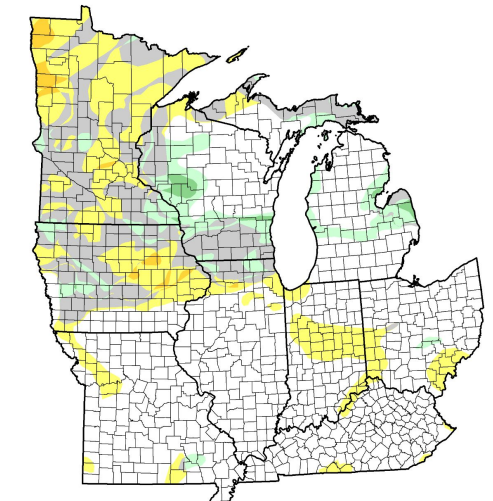


August 17, 2021  
compared to  
August 10, 2021

droughtmonitor.unl.edu

← 1 Week Change

U.S. Drought Monitor Class Change - Midwest Climate Region  
4 Week



August 17, 2021  
compared to  
July 20, 2021

droughtmonitor.unl.edu

4 Weeks Change →



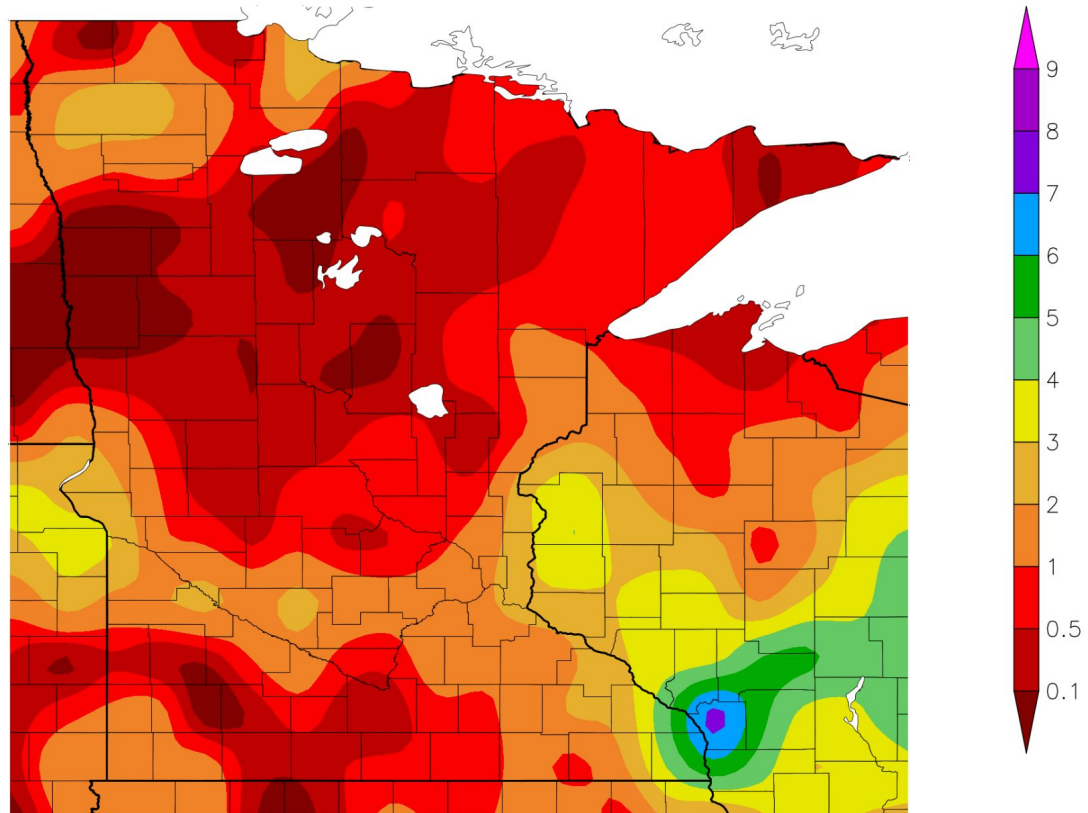
NATIONAL WEATHER SERVICE  
OCEANIC AND ATMOSPHERIC ADMINISTRATION

Twin Cities, Minnesota

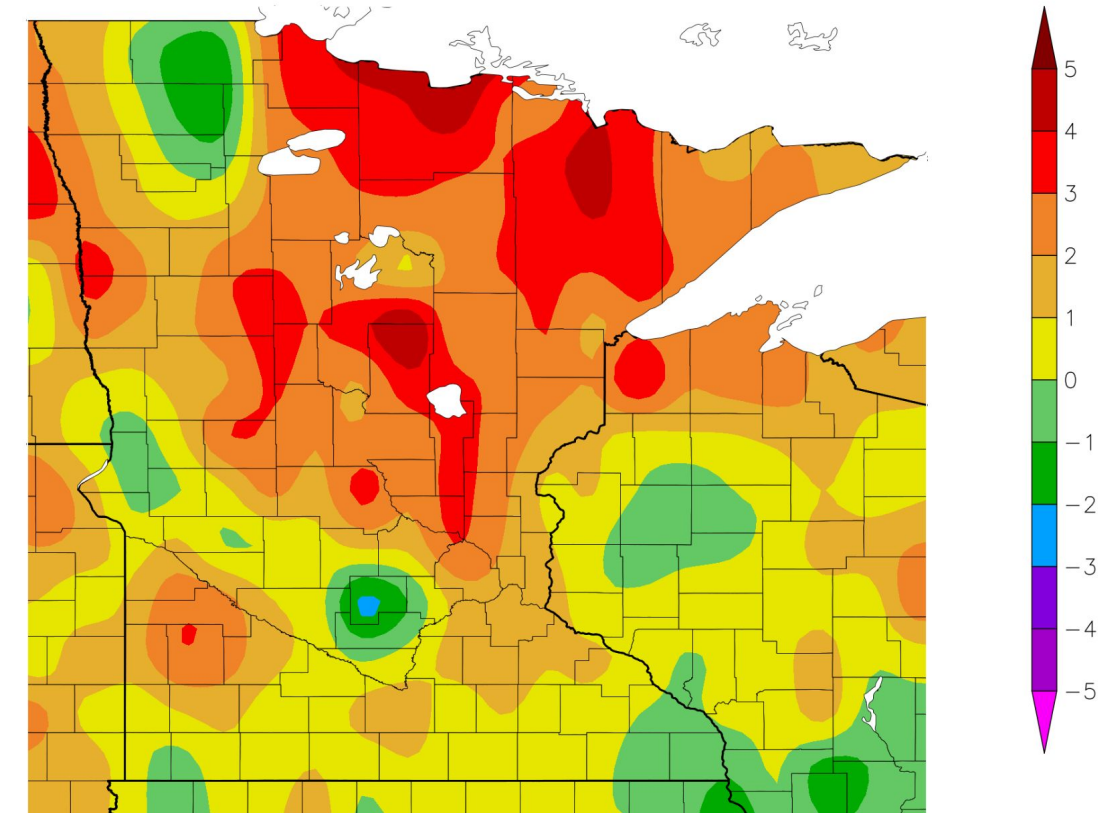


# Recent Precipitation and Temperature August 19, 2021

**Previous 2 Weeks Precipitation Totals**  
8/3/2021 – 8/16/2021



**Previous 2 Weeks Temperature Departure**  
8/3/2021 – 8/16/2021



Generated 8/17/2021 at HPRCC using provisional data.

NOAA Regional Climate Centers

Generated 8/17/2021 at HPRCC using provisional data.

NOAA Regional Climate Centers

## Highlights

- ➔ The past week has been dry, with most of the rain in the past two weeks falling 10-14 days ago.
- ➔ The week of dry weather along with near to above normal temperatures has allowed drought conditions to either remain the same or expand for most of the area.

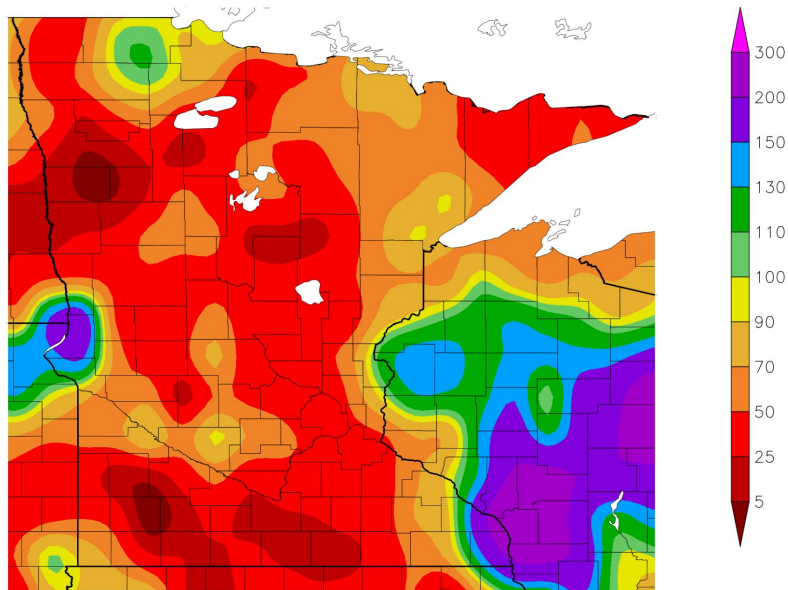


# Precipitation Deficits

August 19, 2021

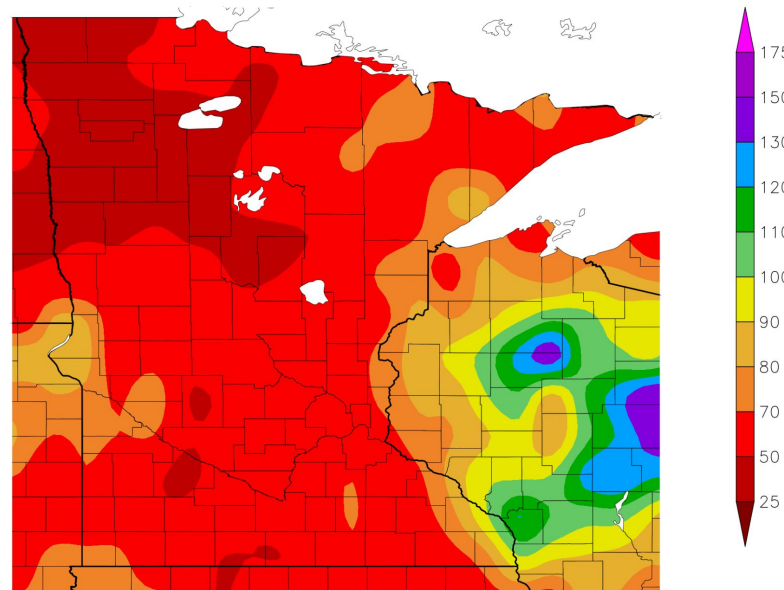
## 30 Day Percent of Normal

Percent of Normal Precipitation (%)  
7/17/2021 – 8/15/2021



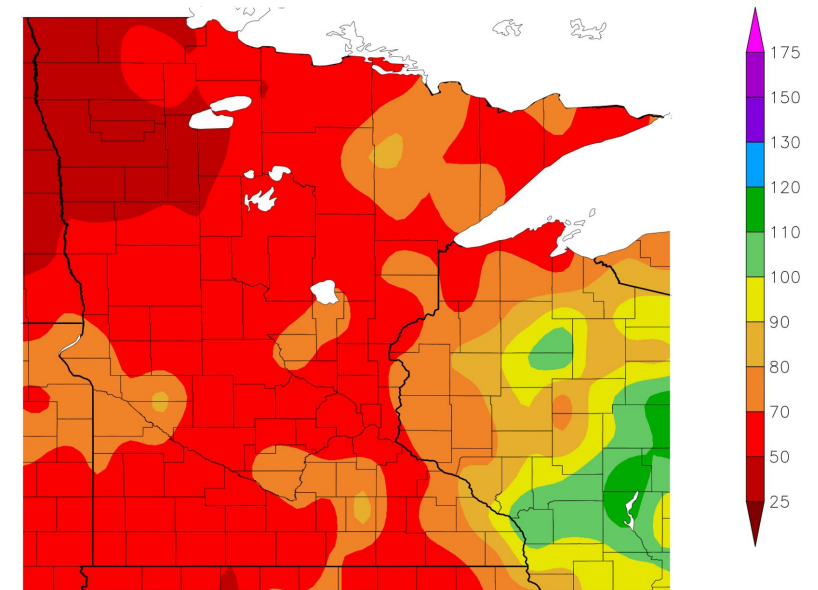
## 6-Month Percent of Normal

Percent of Normal Precipitation (%)  
2/16/2021 – 8/15/2021



## 12-Month Percent of Normal

Percent of Normal Precipitation (%)  
8/16/2020 – 8/15/2021



Generated 8/16/2021 at HPRCC using provisional data.

NOAA Regional Climate Centers

Generated 8/16/2021 at HPRCC using provisional data.

NOAA Regional Climate Centers

Generated 8/16/2021 at HPRCC using provisional data.

NOAA Regional Climate Centers

## Highlights

- Although some shorter term wetness is noted in WI, long term dryness continues to linger there.
- All lengths of time show dryness across MN.

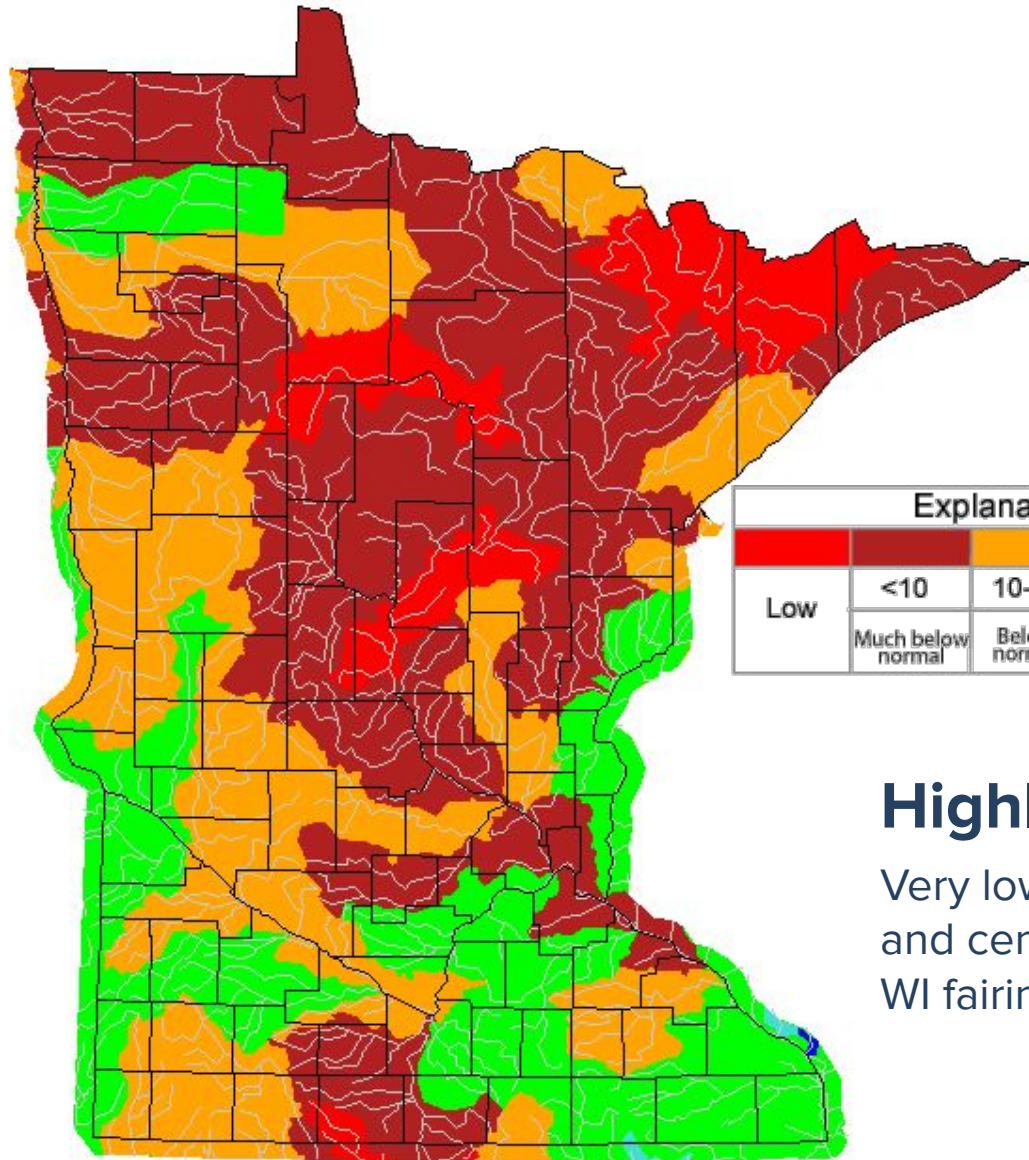


# Hydrologic Conditions - MN and WI

August 19, 2021

Average streamflow for the past 7 days

Wednesday, August 18, 2021

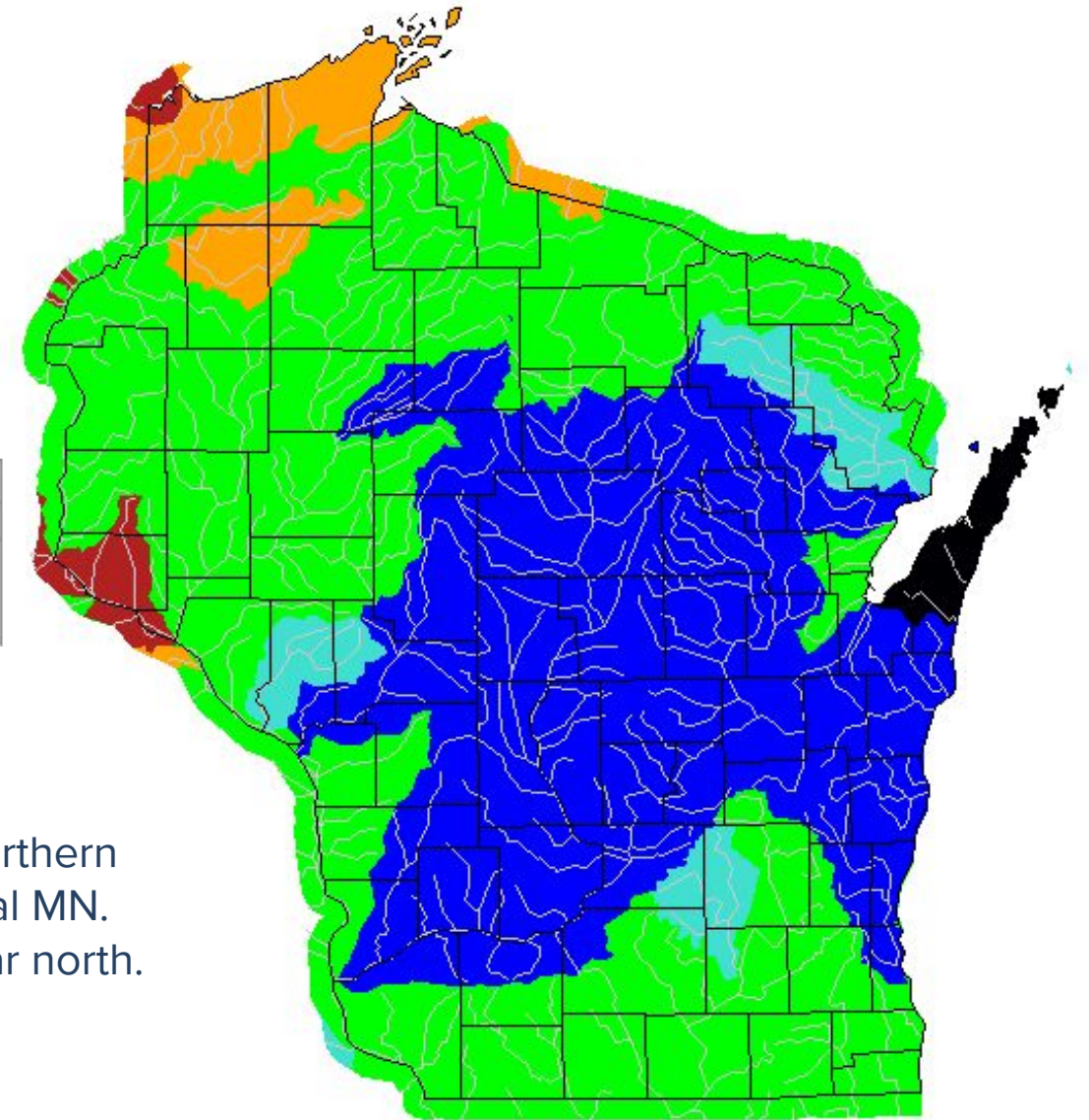


Explanation - Percentile classes							
Low	<10	10-24	25-75	76-90	>90	High	No Data
	Much below normal	Below normal	Normal	Above normal	Much above normal		

## Highlights

Very low river flow over nearly all of northern and central MN, as well as south central MN. WI fairing much better except for the far north.

Wednesday, August 18, 2021

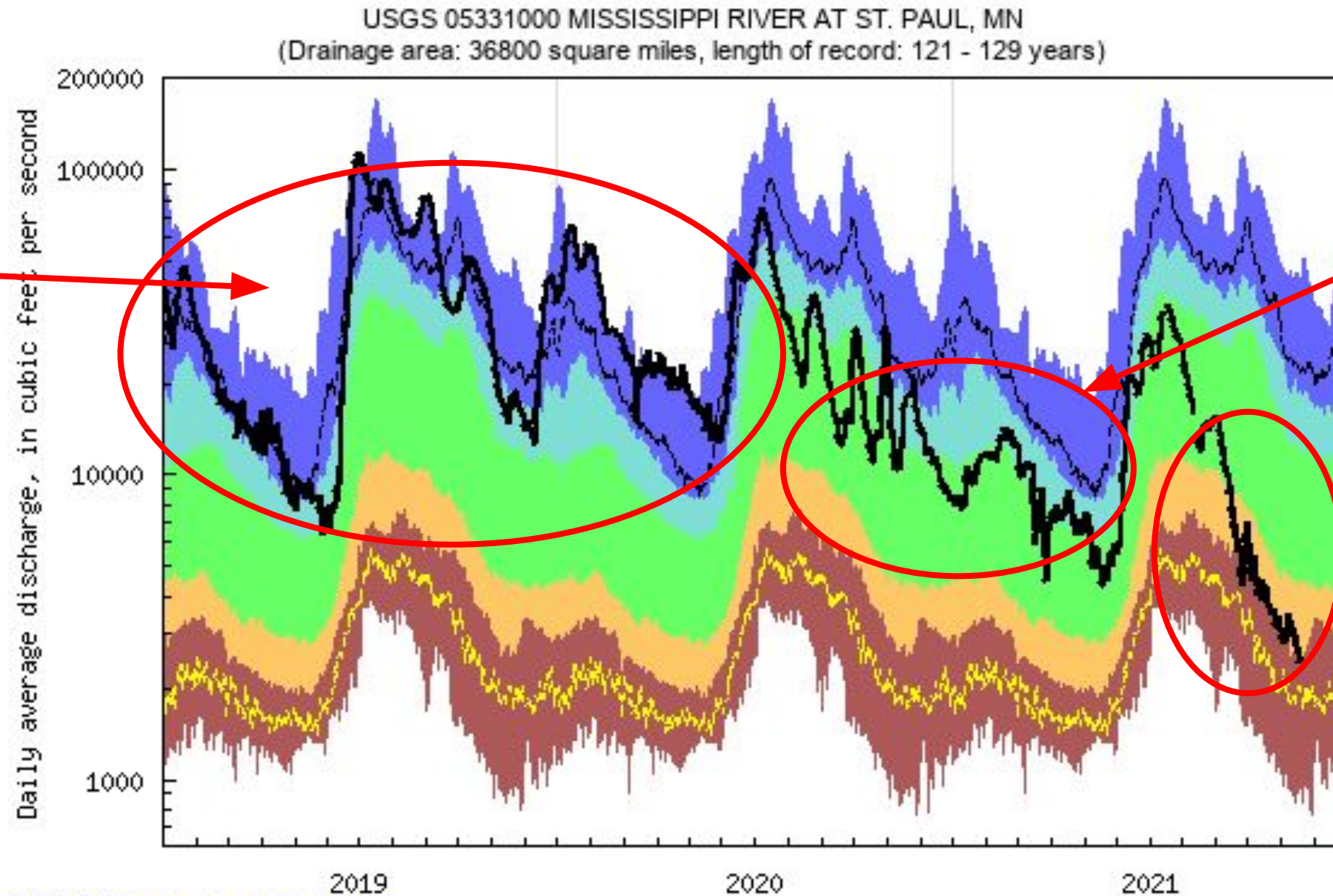




# Hydrologic Conditions - Three Year Trend August 19, 2021

Using Mississippi River at St. Paul to illustrate the trend

2018-19 --  
Much above  
normal flow



2020 --  
Near normal  
flow

2021 --  
Below to  
much below  
normal flow

Explanation - Percentile classes						
lowest- 10th percentile	5	10-24	25-75	76-90	95	90th percentile -highest
Much below Normal	Below normal	Normal	Above normal	Much above normal		Flow

USGS WaterWatch

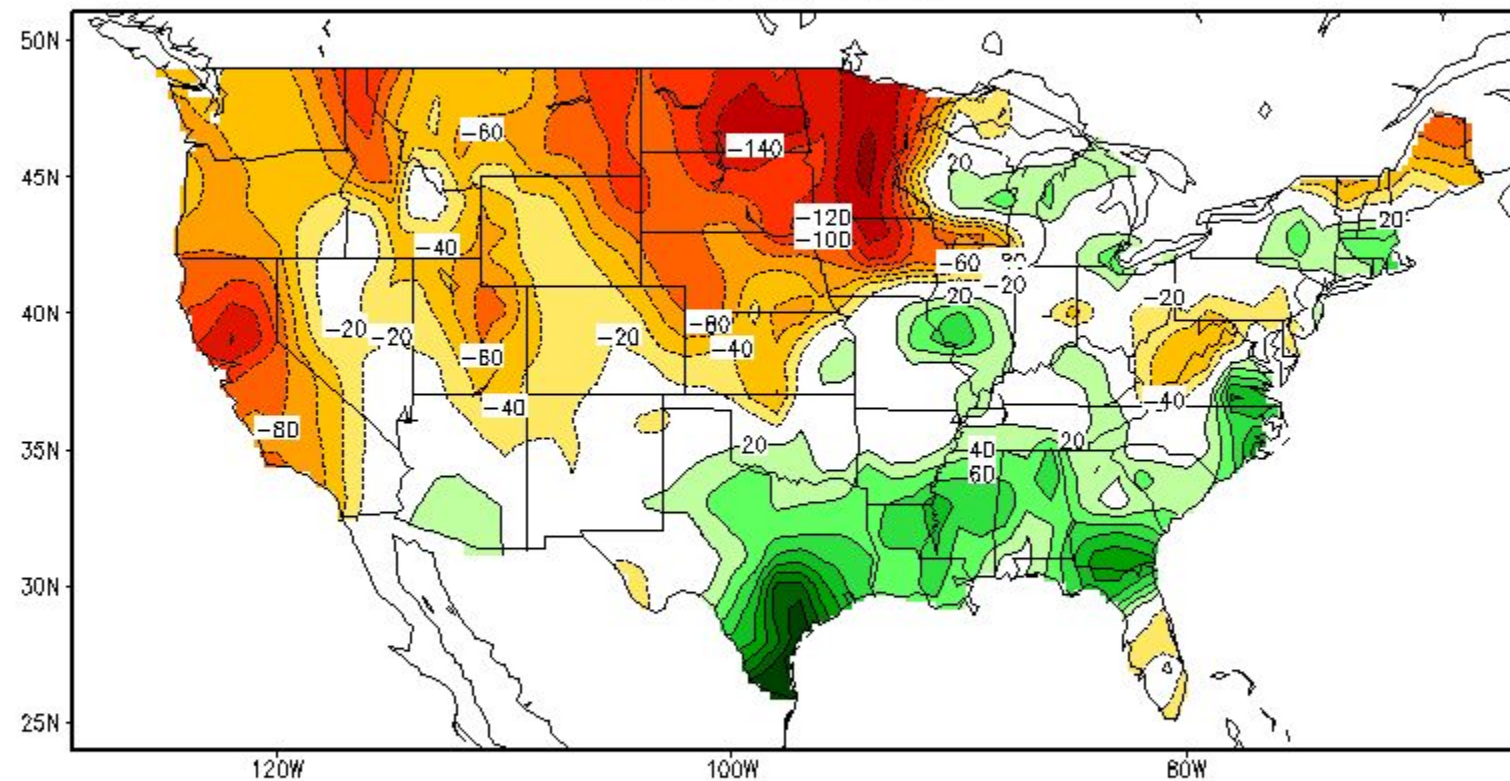
Last updated: 2021-08-19



# Soil Moisture Conditions

August 19, 2021

Calculated Soil Moisture Anomaly (mm)  
AUG 18, 2021



## Minnesota (Entire State)

As of Aug 16	Very Short Moisture	Short Moisture	Adequate Moisture	Moisture Surplus
<b>Topsoil</b>	<b>46%</b>	<b>38%</b>	<b>16%</b>	<b>0%</b>
<b>Subsoil</b>	<b>43%</b>	<b>31%</b>	<b>16%</b>	<b>0%</b>

## Wisconsin (Entire State)

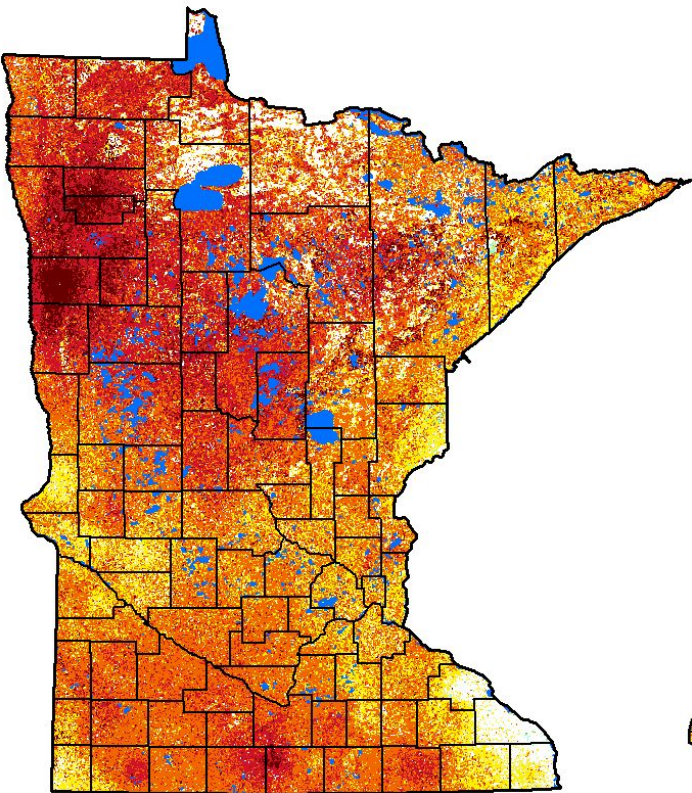
As of Aug 16	Very Short Moisture	Short Moisture	Adequate Moisture	Moisture Surplus
<b>Topsoil</b>	<b>7%</b>	<b>13%</b>	<b>67%</b>	<b>13%</b>
<b>Subsoil</b>	<b>9%</b>	<b>13%</b>	<b>69%</b>	<b>9%</b>



# Current Crop Conditions

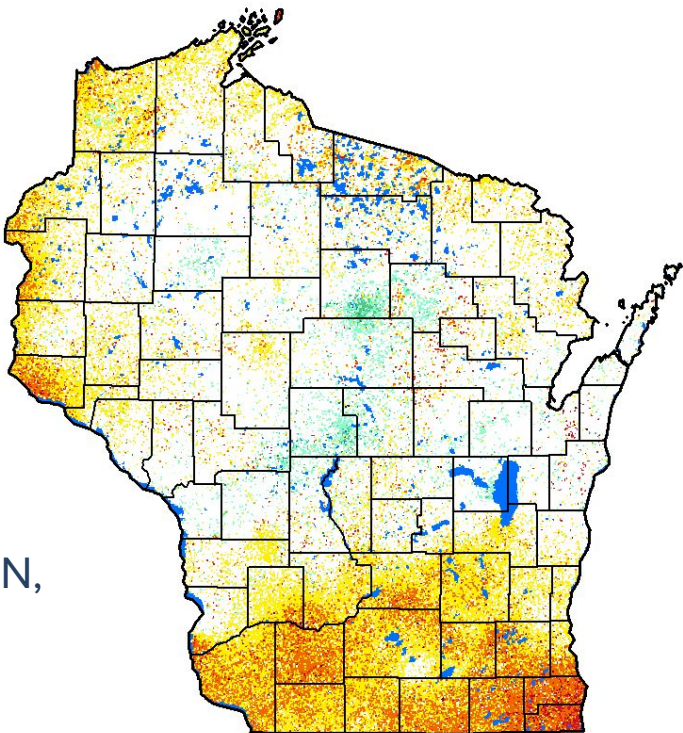
August 19, 2021

Images are current Vegetation Drought Response Index (VegDRI)



## Vegetation Condition

- Extreme Drought
- Severe Drought
- Moderate Drought
- Pre-drought stress
- Near Normal
- Unusually Moist
- Very Moist
- Extremely Moist
- Out of Season
- Water
- Other Landcover



## Highlights

- The biggest impact for agriculture continues to be with pastures in MN, which is impacting livestock herd operations

## Crop Condition as of August 15, 2021 MN

Item	Very poor	Poor	Fair	Good	Excellent
	(percent)	(percent)	(percent)	(percent)	(percent)
Corn.....	9	17	39	30	5
Dry ed. Beans.....	11	21	51	15	2
Pasture and range.....	42	35	16	3	4
Potatoes.....	1	7	32	35	25
Soybeans.....	9	19	43	26	3
Sugarbeets.....	0	4	25	55	16
Sunflowers.....	7	17	47	29	0

## Crop Condition as of August 15, 2021 WI

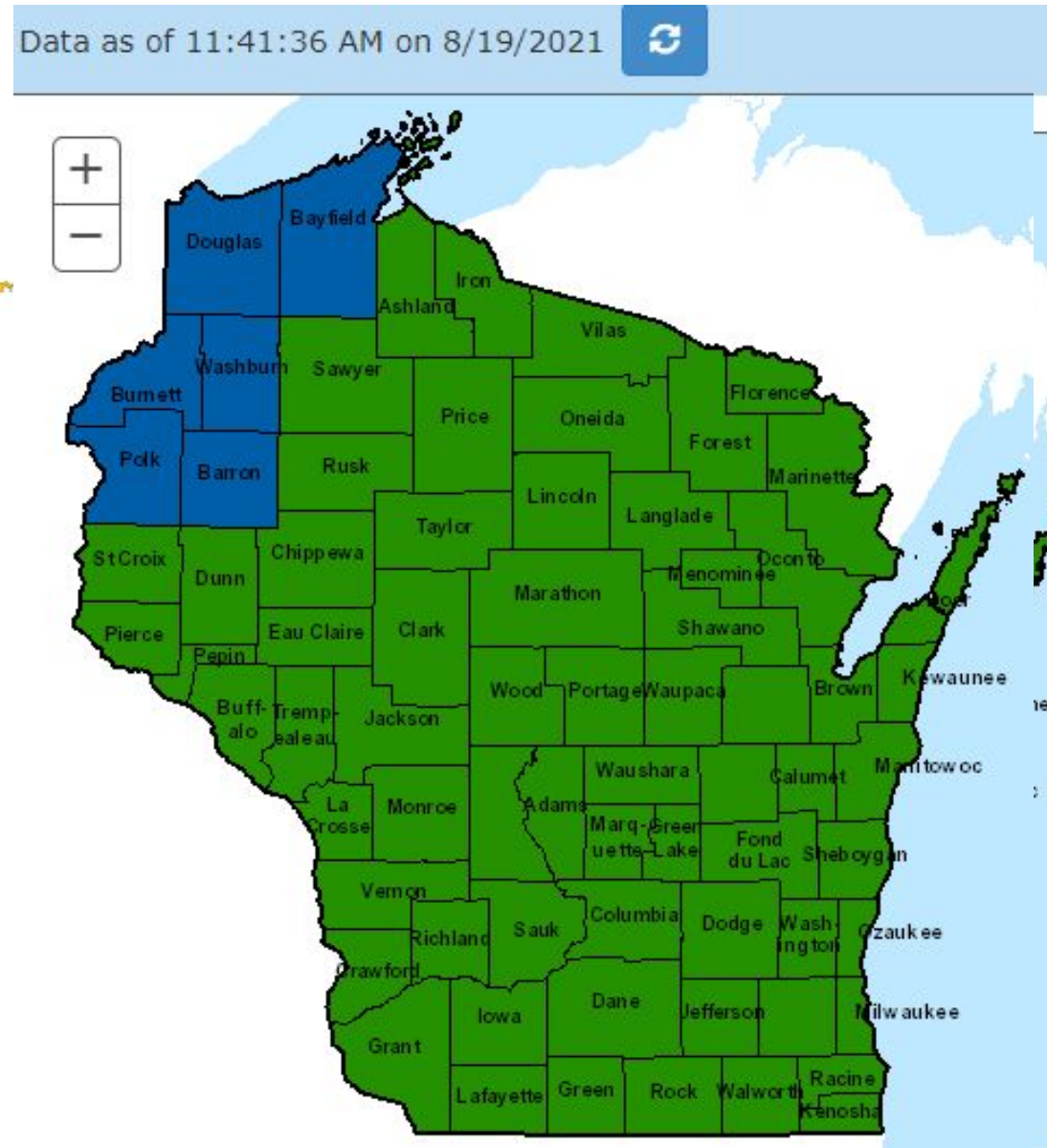
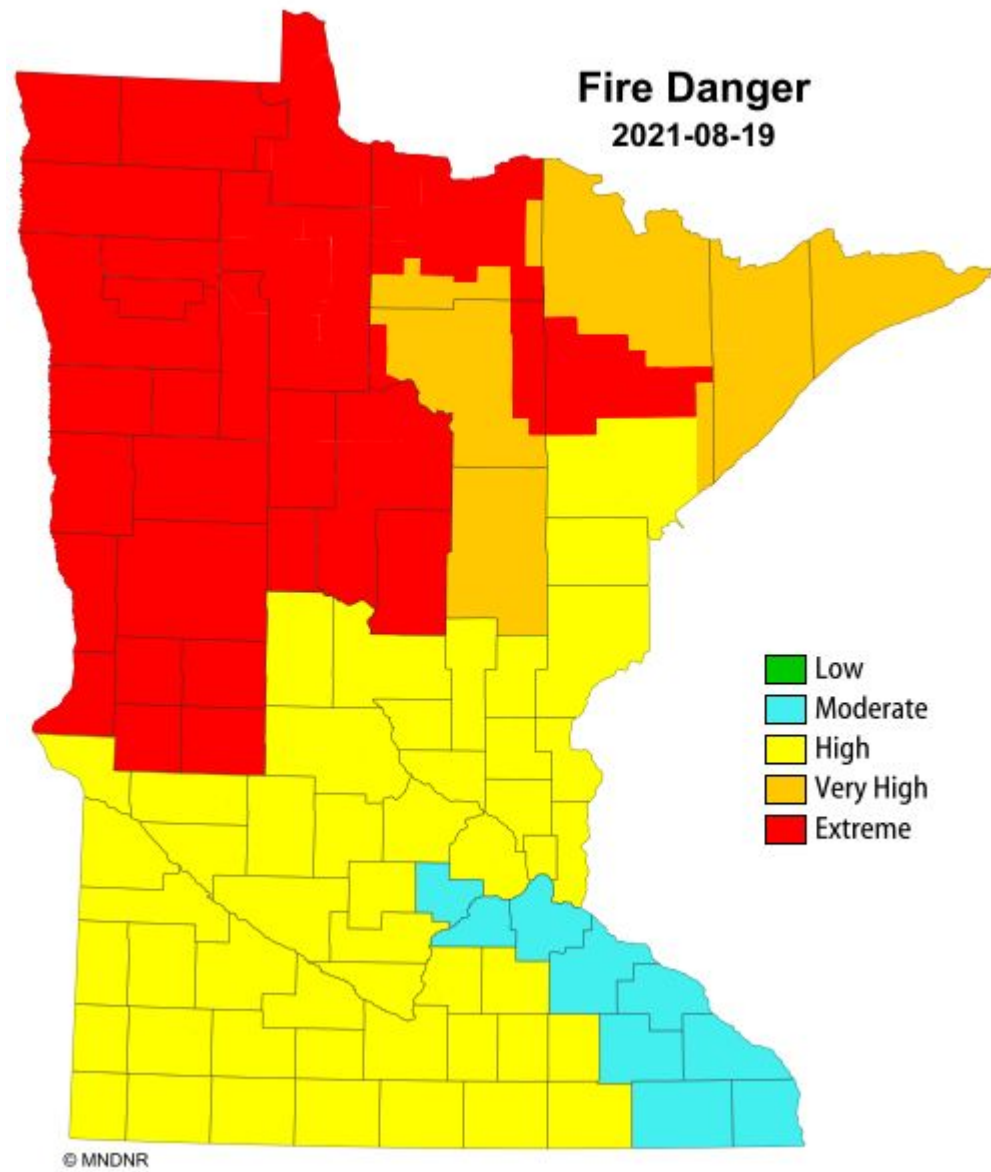
Item	Very poor	Poor	Fair	Good	Excellent
	(percent)	(percent)	(percent)	(percent)	(percent)
Corn.....	1	3	16	50	30
Hay, all.....	3	7	17	53	20
Oats.....	4	3	22	53	18
Pasture and range ....	4	11	23	40	22
Potatoes.....	0	1	5	74	20
Soybeans.....	2	4	17	54	23



# Fire Danger Conditions

August 19, 2021

Fire Danger ratings for date specified **ONLY**



[Current MN Fire Danger](#)

[Current WI Fire Danger](#)

## Highlights

- The most significant wildfire conditions continue to reside in the woods of northern MN, where several wildfires were expanding in the last week.
- The state of MN is at Planning level 5 for wildfire response, the highest possible, indicating firefighting resources are currently stretched out to near their max



# Forecast Precipitation

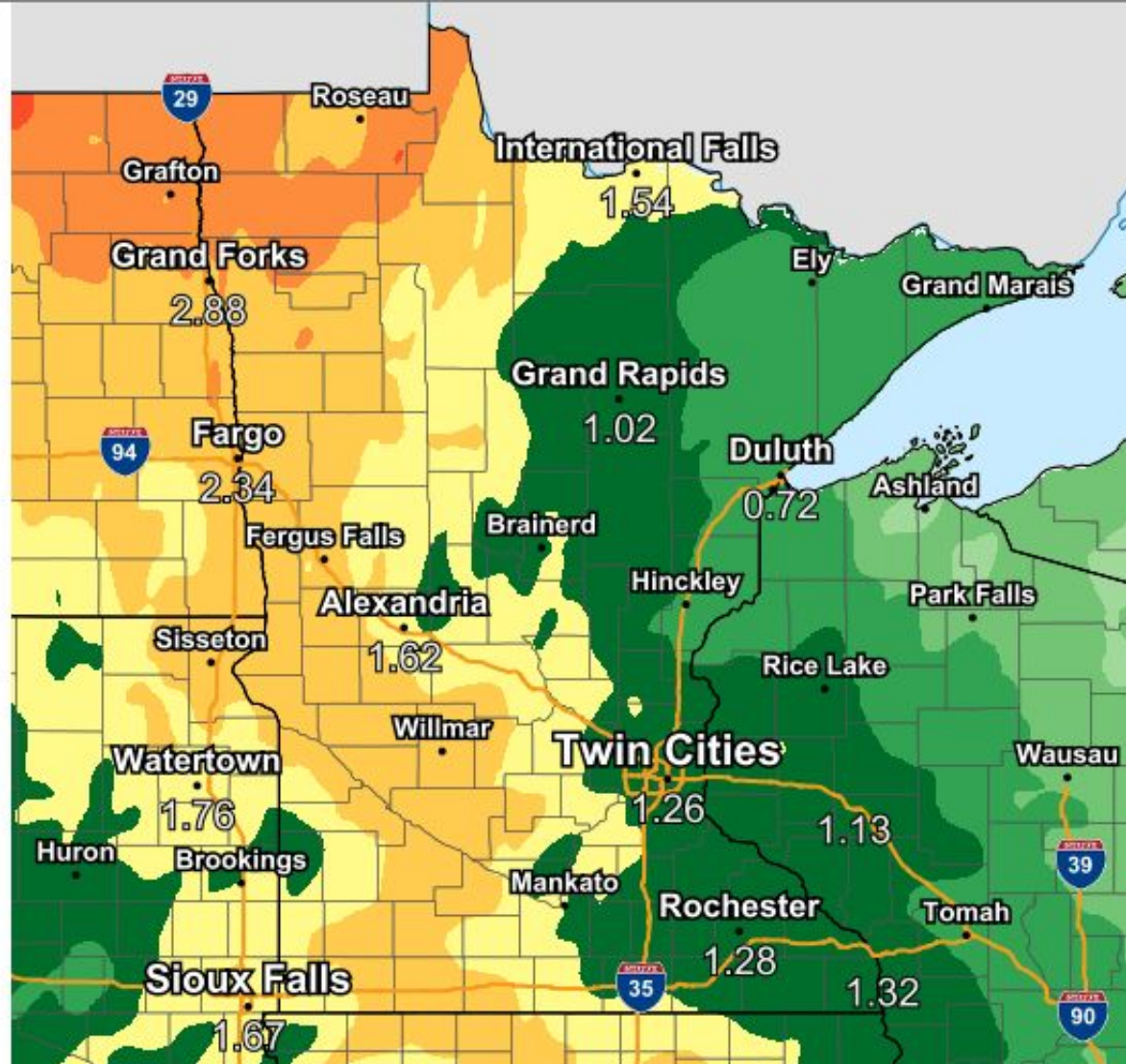
August 19, 2021

Next 7 Days



## Forecast Precipitation

Valid Ending Thursday August 26th, 2021 at 7 AM CDT



Graphic Created  
August 19th, 2021  
10:52 AM CDT

## Highlights

- Though not enough to break the drought, some much needed rainfall is forecast for northwestern MN this week.



# Short Term Climate Outlook

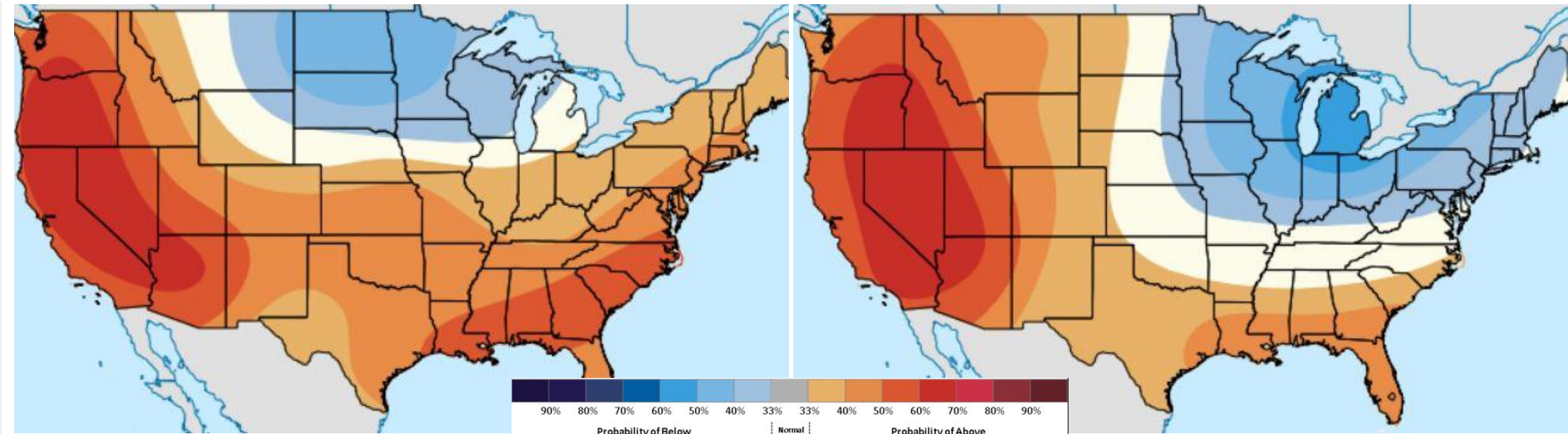
August 19, 2021

For More Information Visit: <https://www.cpc.ncep.noaa.gov/>

## Highlights

- Cooler and drier than normal conditions expected for most of the upper midwest and Great Lakes in week 2.

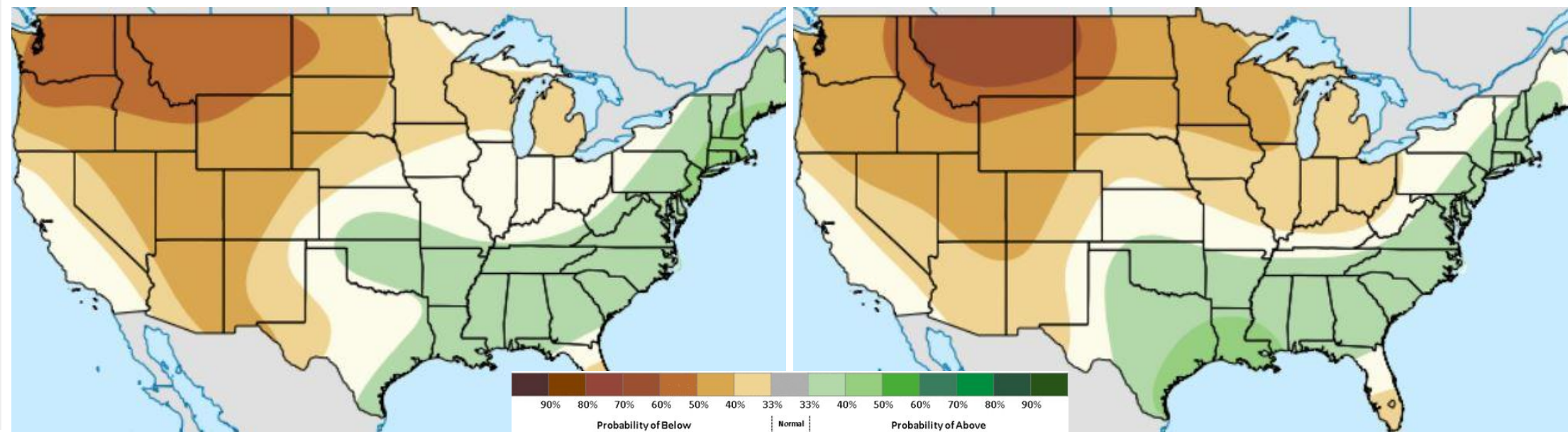
Temperature



6-10 Day Outlook

8-14 Day Outlook

Precipitation





# Drought Category Definitions

August 19, 2021

<b>D0</b>	<b>Abnormally Dry</b>	<b><u>Going into drought:</u></b> <ul style="list-style-type: none"><li>• Short-term dryness slowing planting, growth of crops or pastures</li></ul>	<b><u>Coming out of drought:</u></b> <ul style="list-style-type: none"><li>• Some lingering water deficits</li><li>• Pastures or crops not fully recovered</li></ul>
<b>D1</b>	<b>Moderate Drought</b>	<ul style="list-style-type: none"><li>• Some damage to crops, pastures</li><li>• Streams, reservoirs, or wells low, some water shortages developing or imminent</li><li>• Voluntary water-use restrictions requested</li></ul>	
<b>D2</b>	<b>Severe Drought</b>	<ul style="list-style-type: none"><li>• Crop or pasture losses likely</li><li>• Water shortages common</li><li>• Water restrictions imposed</li></ul>	
<b>D3</b>	<b>Extreme Drought</b>	<ul style="list-style-type: none"><li>• Major crop/pasture losses</li><li>• Widespread water shortages or restrictions</li></ul>	
<b>D4</b>	<b>Exceptional Drought</b>	<ul style="list-style-type: none"><li>• Exceptional and widespread crop/pasture losses</li><li>• Shortages of water in reservoirs, streams, and wells creating water emergencies</li></ul>	



# Questions, Comments, and Resources

August 19, 2021

## Contact Information

If you have questions or comments about this information, please contact:

NOAA/National Weather Service  
Twin Cities/Chanhassen  
1733 Lake Drive West  
Chanhassen, MN 55317

Phone: 952-361-6670

Email: [nws.twincities@noaa.gov](mailto:nws.twincities@noaa.gov)

## Acknowledgments:

The drought monitor is a multi-agency effort involving NOAA's National Weather Service and National Climatic Data Center, the USDA, state and regional center climatologists and the National Drought Mitigation Center. Information for this statement has been gathered from NWS and FAA observation sites, cooperative and volunteer observations, USDAFS, the USDA and USGS.

## Additional Resources

Additional information on current drought conditions may be found at the following web addresses:

U.S. Drought Monitor: [www.droughtmonitor.unl.edu](http://www.droughtmonitor.unl.edu)

Current MN drought conditions: [www.drought.gov/state/minnesota](http://www.drought.gov/state/minnesota)

Current WI drought Conditions: [www.drought.gov/state/wisconsin](http://www.drought.gov/state/wisconsin)

Climate Prediction Center (CPC): [www.cpc.ncep.noaa.gov](http://www.cpc.ncep.noaa.gov)

Midwestern Regional Climate Center: <https://mrcc.illinois.edu/>

MN Climatology Office: <https://climateapps.dnr.state.mn.us/index.htm>

WI State Climatology Office: [www.aos.wisc.edu/~sco](http://www.aos.wisc.edu/~sco)

MN DNR Fire Danger:

[https://www.dnr.state.mn.us/forestry/fire/firerating\\_restrictions.html](https://www.dnr.state.mn.us/forestry/fire/firerating_restrictions.html)

WI DNR Fire Danger: <https://dnr.wi.gov/topic/forestfire/restrictions.asp>

NWS Precipitation Data: <https://water.weather.gov/precip/>

USGS Hydrologic data: <https://waterwatch.usgs.gov/>

USDA crop reports: <https://www.nass.usda.gov/>